

## **REMARKS**

The above amendments and the following remarks are fully and completely responsive to the Office Action dated March 29, 2005. Claims 8-10, 24-27 and 34-37 are pending in this application, with claim 7 cancelled by the present amendment. Of these claims, claims 24-27 were allowed. Claims 7, 8 and 34-37 were rejected under 35 U.S.C. § 103(a). Claims 9 and 10 were indicated as containing allowable subject matter, but were objected to as being dependent upon a rejected base claim. No new matter has been added. Claims 8-10 and 34-37 are presented for reconsideration. Claims 24-27 have been allowed.

### **35 U.S.C. § 103(a)**

Claims 7, 8 and 34-37 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants Admitted Prior Art (AAPA) as shown in Figure 7 in view of Okazaki et al. (U.S. Patent No. 5,247,533, "Okazaki"). In making this rejection, the Office Action asserts that the combination of these two references teaches and/or suggests the claimed invention. The Office Action also asserts that it would be obvious to one of ordinary skill in the art to combine these two references.

The cancellation of claim 7 renders moot the rejection of claim 7.

The amendment of claim 8 to depend from claim 9 and the amendment of claim 9 to be in independent form renders moot the rejection of claim 8.

Claim 34, as amended, recites in part:

wherein the group V element is selected from the group consisting of P and As.

Okazaki, in the embodiment illustrated in Figure 4 and the description thereof, teaches using a GaN substrate. However, Okazaki neither teaches nor suggests that the group V element N may be replaced by either P or As.

Accordingly, the combination of the AAPA and Okazaki fails to teach and/or suggest the claimed invention. Specifically, the combination of these two references fails to teach and/or suggest that the group V element forming the group III-V compound semiconductor substrate is selected from the group consisting of P and As. Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 34 and of claims 35 and 37 which depend thereon.

Independent claim 36 recites in part:

wherein the buffer layers are made of n-type  $\text{Ga}_w\text{In}_{1-w}\text{N}$  ( $0 < w \leq 1$ ).

Okazaki teaches using an N-type GaN buffer. Similarly, the AAPA also teaches using an N-type GaN buffer. Consequently, neither reference teaches and/or suggests that the buffer layers could be formed from an N-type GaInN material.

Consequently, the combination of the AAPA and Okazaki fails to teach and/or suggest the claimed invention. Specifically, the combination of these two references fails to teach and/or suggest that the buffer layers are made of N-type  $\text{Ga}_w\text{In}_{1-w}\text{N}$  ( $0 < w \leq 1$ ). Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 36.

### **Allowable Subject Matter**

Claims 9 and 10 were indicated as containing allowable subject matter, but were objected to as being dependent upon a rejected base claim. Applicant has amended

claims 9 and 10 to place these claims in independent form. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection to claims 9 and 10.

### **Allowed Claims**

Claims 24-27 were allowed. Claim 27 has been amended to correct a typographical error.

### **Conclusion**

Applicant's amendments and remarks have overcome the objections and rejections set forth in the Office Action dated March 29, 2005. Specifically, Applicant's remarks have distinguished claims 8 and 34-37 from the combination of the AAPA and Okazaki and thus overcome the rejection of these claims under 35 U.S.C. § 103(a). Applicant's amendments of claims 9 and 10, to place these claims in independent form, overcome the objection to these claims. Accordingly, claims 8-10 and 34-37 are in condition for allowance. Therefore, Applicant respectfully requests consideration and allowance of claims 8-10 and 34-37. Claims 24-27 are allowed.

Applicant submits that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicant respectfully requests that the Examiner contact the undersigned attorney by telephone if it is believed that such contact will expedite the prosecution of the application.

In the event that this paper is not considered to be timely filed, Applicant respectfully petitions for an appropriate extension of time.

The Commissioner is authorized to charge payment for any additional fees which may be required with respect to this paper to our Deposit Account No. 01-2300, making reference to attorney docket number 100006-00005.

Respectfully submitted,  
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